

Appendix A

**Comments from *EnergySolutions*,
Tye Rogers, Senior Vice President of
Regulatory Affairs**



September 21, 2007

CD07-0312

Dane Finerfrock
Executive Secretary
Utah Radiation Control Board
168 North 1950 West
Salt Lake City, Utah 84114-4850

Handwritten initials, possibly 'DJ', in black ink.

Re: Radioactive Material License Number UT 2300249 – Comments on Draft License Renewal

Dear Mr. Finerfrock:

Thank you for providing the opportunity to comment on the draft renewal for Radioactive Material License Number UT 2300249 and the supporting Safety Evaluation Report (SER). Each License condition or section of the SER is referenced in bold followed by our comment.

Draft Radioactive Material License comments:

Condition 9.H: As requested in our letter dated November 15, 2006, please remove this license condition. The training cask has been disposed.

Condition 10.D: Please remove the license condition. The section corners and placed monuments were verified by Olympus Aerial Surveys, Inc. in December 2004; making this condition obsolete.

Condition 27: Please revise to read as follows in order to clarify the release requirements for conveyances used for commercial transport of radioactive waste: "Vehicles, containers, facilities, materials, equipment or other items for unrestricted use shall not be released from the Licensee's control if contamination exceeds the limits found in Table 27-A. The only exception to this is for conveyances used for commercial transport of radioactive waste or materials, which may be returned to service in accordance with the requirements of 49 CFR 173.443(c)."

Condition 28: Data from the Cover Test Cell were evaluated in conjunction with the Class A Combined amendment request to justify a thicker Evaporative Zone Depth (EZD). The request for a thicker EZD was rejected and no further interrogatories were issued with respect to the cover test cell. The inclusion of a License Condition with the due date of September 30, 2007 to resolve issues regarding an unrelated license

amendment is severe; particularly since DRC extended the public comment period to September 21, 2007 and the timeframe for issuance of the final license once this comment period closes is unknown.

EnergySolutions submitted its request for license renewal on July 2, 2003 (over 4 years ago). The last set of interrogatories on the cover test cell was transmitted in March 2006 (1.5 years ago). As a result of these evaluations, DRC and URS staff concluded that the data from the test cell did not justify increasing the EZD from 18-inches to 24-inches for the modeling of the Class A Combined Cell. No additional communications were received regarding the Cover Test Cell until the issuance of the draft License. The Division's actions are not consistent on this item.

EnergySolutions has contracted with Desert Research Institute to evaluate the effectiveness of the Cover Test Cell. We request a meeting with DRC staff to develop specific goals and performance objectives for the Cover Test Cell. EnergySolutions maintains that the only objective of the cover test cell is to evaluate performance modeling previously conducted, specifically the infiltration rate through the test cell. In addition, the cover test cell can be used to verify that the sacrificial soil barrier is protecting the radon barrier from freeze/thaw cycles. Interrogatories received to date focus on the soil moisture monitoring equipment installed in the cover system. These data, although useful in determining EZD, are not used in the evaluation of the performance modeling. The conservative nature of the modeling assumes that the soil layers in the cover system are at or near saturation. Infiltration rates through the test cell, however, are orders of magnitude lower than the modeled infiltration rates. The data ranges from 0.072 cm/year in 2002 (the first year of monitoring data, as the test cell drained construction water and started to reach equilibrium) to 0.000 cm/year for 2007 year-to-date. To date, the infiltration through the test cell averages 0.0267 cm/yr (including the first year of monitoring data) compared to the modeled infiltration rate of 0.265cm/yr – an order of magnitude lower. In addition, the clay temperature measurements demonstrate that the sacrificial soil layer is preventing freeze/thaw in the radon barrier.

EnergySolutions respectfully requests that at a minimum, the mandatory date of September 30, 2007, be removed from the License. A minimum of 6 months is requested to fully evaluate the concerns that were only recently made evident by the issuance of the license. Similarly, the stipulated deadline of 30 days to complete new instrumentation or construction, when the nature and scope of any potential new instrumentation or construction is currently unknown, is not realistic, reasonable, or in keeping with DRC's lack of urgency on this issue to date. We also request that this issue be transferred to the Groundwater Quality Discharge Permit, as the Permit deals more directly with the

dynamics of the test cell. EnergySolutions looks forward to resolving this issue with DRC staff.

Condition 32.D: The addition of this condition appears to be from interviews conducted several years ago by URS staff. EnergySolutions was not provided the opportunity to discuss these concerns with DRC and URS staff prior to the issuance of the license. EnergySolutions' management organization has been approved by the DRC and explicitly provides for the exact requirements found in this license condition. Section I.1.5 of Appendix I states that the Director of Health Physics and the Health and Safety Manager report to the Vice President of Clive for day to day activities. For radiation safety issues, the Director of Health Physics reports to the Corporate Radiation Safety Officer. For health and safety issues, the Health and Safety Manager reports to the Corporate Director of Safety and Health. DRC's approval of this organizational structure indicates that EnergySolutions adequately maintains organizational independence of programs critical to safety and environmental protection.

Furthermore, page 89 of the SER acknowledges that the renewal application includes a description of how EnergySolutions ensures the independence and authority of the quality assurance program and quality assurance personnel. Therefore, this license condition simply re-states a requirement already complied with and already incorporated by reference in Condition 32.A. Furthermore, it is not clear how this condition would be inspected against nor how compliance would be documented by EnergySolutions, beyond the DRC-approved organization as described in Appendix I.

Condition 32.E: The addition of this condition appears to be from interviews conducted several years ago by URS staff. EnergySolutions was not provided the opportunity to discuss these concerns with DRC and URS staff prior to the issuance of the license. EnergySolutions has maintained a formal program enabling any employee or contractor to anonymously submit their concerns for many years now. This is a vital program that EnergySolutions takes very seriously. Had we been given an opportunity to address the concern prior to issuance of the draft license for public comment, we would have demonstrated such. By raising the issue in the draft license and SER based on incomplete information about EnergySolutions' program, the public may be misled about how seriously EnergySolutions takes whistleblower protection.

A formal Whistleblower Protection Policy was submitted to the NRC in 1998. Employees were provided training on the program. Since that time, the program has evolved and is currently incorporated within the Employee Policy Manual. The current program is referred to as SilentWhistle, and provides an anonymous avenue for raising concerns without the fear of retaliation. EnergySolutions employees are given specific

initial training on how to raise concerns within the company as well as the availability of the SilentWhistle Program and Whistleblower Protection Program.

EnergySolutions expects employees to raise nuclear safety and compliance concerns to their supervisors using normal processes or as set forth within the Environmental and Nuclear Safety Compliance Program. Although this program is available, EnergySolutions encourages employees, if they feel it necessary, to raise concerns directly with the Nuclear Regulatory Commission, DRC, or other regulatory agencies at any time they believe that these agencies should be aware of their concerns. EnergySolutions does not believe that a specific license condition requiring that a method for providing anonymous concerns, etc. to the CRSO should be required. Furthermore, the way this license condition is written ignores the existing program and its long history.

The SilentWhistle program is prominently advertised through posters in lunchrooms and other employee gathering points throughout our facilities. In addition, the program is discussed in detail in the employee policy manual provided to each individual upon initial employment and when updated. This program is a standard requirement of federal government contracts. As a long-time government contractor, EnergySolutions has a mature program and could have easily demonstrated such, were we given an opportunity to do so before issuance of the draft RML.

Condition 34: The timeline for this issue is provided as Attachment 1. Requiring a response 30 days after the issuance of the license is not acceptable. When requested, EnergySolutions responded immediately to fund restoration of grade within Section 32 and was informed by DRC staff that restoration of grade outside of Section 32 would be addressed following license renewal. At that time, EnergySolutions staff requested a meeting with DRC personnel to establish criteria that would be acceptable to both sides. DRC has not responded to this request. EnergySolutions and Whetstone Associates need to meet with DRC staff in order to respond adequately to Interrogatory CAC R313-22-32(1)-05/3. Therefore, EnergySolutions respectfully requests that a response to this Interrogatory be required within 180 days after issuance of the license.

Condition 39.C: Please correct the position title in the last sentence to “Corporate Radiation Safety Officer.” The Containerized Waste Facility Corporate Radiation Safety Officer was removed as a distinct position in revision 18 of Appendix I. The currently approved revision is 19, dated October 6, 2006.

Condition 45: Please remove the last sentence of this Condition. As documented in our letter dated January 5, 2007, EnergySolutions has secured AMRL accreditation.

Condition 76: Please delete this condition, as surety costs for these facilities have been submitted, approved by DRC, and funded.

Condition 88: Conditions 88.A through 88.CC reflect licensing actions incorporated into the License renewal and are therefore redundant to carry forward. Many have been superseded by successive licensing actions. Similarly, Conditions 88.DD.(1) through (9), among many others, reference reports included with or incorporated by reference into the License Renewal Application; it would streamline the license to simply reference the renewal application. Condition DD.(12) will be superseded each year by subsequent annual surety reviews and does not need to be explicitly referenced to be enforceable; otherwise, DRC would need to amend the license each time the surety calculations change. Conditions 88.DD.(34) and 88.DD.(44) through (58) deal with the Class A Combined embankment and should be removed from this License, as the Class A Combined license amendment was not completed. It would be confusing to DRC, EnergySolutions, and the public to reference documents that do not represent the basis for the issuance of a license. Conditions DD.(65) through (68) refer to draft revisions to the CQA/QC Manual completed 5 years and 6 revisions ago. All of these documents are available in the historical records for these various licensing actions that have long since been completed; and in many cases superseded by later licensing actions.

Draft Safety Evaluation Report comments:

Page 8, 7th bullet: The appeal of the Class B&C License is introduced in the 4th bullet on this page. Therefore, it would also be appropriate to note here that, prior to final agency action on that license, this appeal was denied.

Section 4.1 “Summary of Findings”

2. This statement is incorrect. Our Document Control program includes providing DRC with a “controlled copy” of all operating procedures. This program includes a formal transmittal of each revision to any procedure.

4. This comment is baseless speculation, and EnergySolutions was provided no opportunity to provide existing data to the contrary. No basis is suggested for the allegation that turnover may lead to increased worker exposures. Workers at the Clive facilities receiving the highest individual Total Effective Dose Equivalent are routinely less than 10% of the permitted occupational dose. Technically, per DRC rules, EnergySolutions is not required to issue dosimetry to Clive radworkers due to the very low doses they receive.

6. The procedure review and formalization process has recently been streamlined. The comment that the process is "...overly complex..." seems to contradict later comments regarding increased formalization of engineering design reviews.

7. The allegation that "...no effort is made to verify understanding..." is unfounded and incorrect. BWF staff conduct daily operations briefings to discuss each day's operations, including specific concerns as needed. In addition, weekly safety meetings are held to provide on-going training and discussion opportunities; weekly site management meetings are held with the compliance and permitting department; and a monthly managers' meeting is held to highlight specific safety and regulatory compliance topics.

8. This comment ignores the annual submittal of actual occupational dose data to DRC. This is much more valuable data than revising past models, and indicates that EnergySolutions' radiation safety program is functioning effectively in maintaining occupational exposure at low levels, in spite of fluctuating waste volumes and hours worked.

9. Staffing levels relative to waste receipts and maintaining compliance with regulatory requirements are continually reviewed. At the time of URS' interviews, waste receipts were at a record volume but have since dropped dramatically.

10. The practice of placing waste prior to receiving complete analytical results has been performed in compliance with the Waste Characterization Plan. Any time that waste has needed to be excavated, it has been done so in a manner that is protective of human health and the environment. EnergySolutions recognizes that it is not desirable to excavate previously placed waste, and so has implemented operational controls to reduce the disposal of waste prior to receiving analytical results.

Section 4.2.1 "Areas of Concern to the Division"

1. Although EnergySolutions as a whole has a Quality Program consistent with NQA-1, the activities at the Clive facility are considered "commercial grade". Therefore NQA-1 would not be applicable. Data obtained from design and technical support contractors is reviewed by EnergySolutions' engineering and other technical staff prior to acceptance.
2. This process is already in place. EnergySolutions performs an internal review of each design and analysis submittal to DRC. Internal reviews include the applicable affected disciplines. We do not rely upon DRC to assess design adequacy; however, continually changing design and supporting information expectations make it difficult to know what level of information will be needed for a particular project. For example, a point of discussion on the NW

Evaporation Pond was the potential for wind uplift to affect the liner during installation; this had never been raised as an issue in permitting other ponds at the Clive facility. A concern raised during licensing of the Shredder Facility was the potential impact on site wastewater generation, which led to a requirement to calculate and submit a facility water balance; this had never been raised as an issue in licensing a new facility before.

3. This is in place. Field training is performed and documented using the qualification form system. Qualification for field functions involves review of requisite procedures, a written test, and observation of field activities. In this system, subject matter experts (SMEs) are designated by applicable managers, and play a key role in the evaluation of job performance. SMEs are also responsible to review qualification exams.
4. EnergySolutions had already identified an opportunity for improvement in this area and has initiated steps to address it. Procedures are in development and are being tracked in our Quality Assurance system under Condition Report CR07-003.
5. This comment is unfounded. EnergySolutions performs an internal review of each design and analysis submittal to DRC. This review explicitly evaluates permit and license requirements that may be applicable to the project in question. Satisfying regulatory requirements is always a dominant consideration of the design process.
6. This comment is unfounded, as design documents are currently approved and stamped by a licensed Professional Engineer, as required under License Condition 48.B.
7. While EnergySolutions supports the goal of reducing revisions to licensing and implementation documents, this goal is not always practical given new information, new waste streams, and new technologies. Furthermore, we note that revision control is always maintained and that our Document Control program ensures controlled copies of all revisions are provided to DRC.
8. The comment is unfounded. Document Control procedures are in place and have been for many years to ensure that superseded versions of documents are not incorrectly used. If DRC or URS are aware of instances where this has not been the case, please share this information with us so the situation can be corrected.
9. The comment is unfounded, as there is a separation between organizational functions and responsibilities for commercial and safety/quality considerations. This separation is explicitly incorporated in our Organization as incorporated into the License at Condition 32.A. See also our comments to Condition 32.D above.
10. The comment is unfounded, as a formal program is already in place. See our comments to Condition 32.E above.
11. This is an ongoing process. The training procedures are currently under review and being updated to reflect current job titles and training requirements. As procedures are updated, training is provided once the revised procedure becomes

effective. Training on departmental procedures is typically delivered by the applicable department. Training may also be delivered as part of periodic manager/foreman training. Qualification forms are currently under review to update references to new procedures/requirements.

12. The comment is unfounded, as all personnel do have training on and ready access to controlled revisions of procedures that affect their work activities.
13. *EnergySolutions* had already identified an opportunity for improvement in this area and has initiated steps to address it. Procedures are in development and are being tracked in our Quality Assurance system under Condition Report CR07-003.
14. The comment is unfounded. *EnergySolutions* implements Quality Assurance controls on purchasing functions using an approved vendor system. *EnergySolutions* has implemented a graded approach to quality. This approach establishes the control over items, services and activities affecting quality to an extent consistent with their importance through the assignment of defined quality levels. Items affecting quality are assigned a Quality Level of 1, 2 or 3 which determines the QA rigor and controls associated with these items. Additionally, only vendors which have been evaluated and approved are used when procuring Quality Level 1 and 2 items. This ensures that the supplier has implemented adequate internal controls to ensure the quality of items or services provided.
15. Staffing levels relative to waste receipts and maintaining compliance with regulatory requirements are continually reviewed. At the time of URS' reviews, waste receipts were at a record volume but have since dropped dramatically.

Section 4.2.2 "Areas Not Impacting Licensure at This Time"

1. *EnergySolutions* agrees, and notes that DRC is generally fair in this regard.
2. *EnergySolutions* had already identified an opportunity for improvement in this area and has initiated steps to address it. Procedures are in development and are being tracked in our Quality Assurance system under Condition Report CR07-003.
3. *EnergySolutions* is not aware of any problems in the current process that would support implementing this change. All changes that impact the Hazardous Waste Permit are coordinated with, if not prepared by, the Environmental Engineer.
4. This comment is not warranted. Procedures are readily updated as needed, and subject to annual review by the CRSO, as required by License Conditions 20 and 21.
5. A hazard communication procedure which references the OSHA regulated substances is currently in place and has been for some years. Specific procedures governing exposure to Lead and Beryllium are also in place. Additional substance-specific procedures may be developed as circumstances require.

Section 5.4.2.3.3, page 59-60: The discussion of settlement plate monitoring indicates that plates on top of the temporary cover will be extended through the final radon barrier. This is incorrect, and it would be contrary to sound cover design to penetrate the final radon barrier this way. Rather, the settlement plates on the temporary cover will be removed at the time of final cover construction, and new plates will be placed on top of the completed radon barrier, anchored in the drainage and rip rap rock layers. Please refer to the CQA/QC Manual for details.

Again, thank you for the opportunity to comment on the draft license renewal and supporting Safety Evaluation Report. I and my staff are available to discuss our comments at your convenience. Please call me at 801-649-2000 with any questions concerning this issue.

Sincerely,



Tye Rogers
Senior Vice President of Regulatory Affairs

cc: Loren Morton, DRC
John Hultquist, DRC

Attachment 1: Restoration of Grade Timeline

<u>Date</u>	<u>Description</u>
4/30/2001	DRC letter regarding harvest of clay from Section 5 and potential impacts
7/11/2001	ES response to DRC letter regarding the harvesting of clay from Section 5; submittal of Whetstone infiltration modeling based on proposed excavation plan
7/19/2001	DRC letter regarding Grade Restoration/Trust Submission 15, dated June 14, 2001
8/31/2001	ES submittal of Annual Surety Review 16A provides response to DRC letter dated 07/19/01 (submittal of Ratio of Run-off and Receiving Areas for Groundwater Level Impact Assessment, July 10, 2001 by Whetstone and Associates)
11/16/2001	DRC Letter regarding Trust Submission 16a dated 08/31/2001. Restoration of Grade issue with proposed use of evaporation ponds and controlled flow into areas where evaporation can eliminate surface water. Rules quoted regarding contents of application for site closure and stabilization.
12/21/2001	ES response to DRC letter dated 11/16/01. Clarification of proposed plan. Term "evaporation ponds" incorrect. Use of localized depressions requiring no long-term maintenance.
1/24/2002	Meeting Held with DRC – determination made that the issue would remain unresolved with annual surety but will be resolved at a later date
2/1/2002	ES response to DRC letter dated 11/16/01 and comments received at meeting on 01/24/02.
7/8/2002	DRC letter requesting to address restoration of grade as part of annual surety review submitted 2002
8/30/2002	ES submittal of Annual Surety Review with response to Restoration of Grade proposing the stabilization using passive system.
1/23/2003	DRC response to Annual Surety Review DRC position on restoration of grade reiterated
4/9/2003	ES response to DRC 1/23/03 letter.
11/12/2004	DRC letter to ES regarding Restoration of Site Drainage Study and request for schedule for study completion
12/14/2004	ES response to 11/12/04 letter and submittal of complete response, no additional schedule required.
2/23/2005	DRC to ES request for additional information
3/25/2005	ES response requesting that restoration of grade be resolved with renewal and requested DRC review of previously submitted modeling and ENG-9.1, <i>Clay Mining and Excavation</i> .
4/22/2005	DRC response and directive for issue to be resolved separate from renewal
5/3/2005	Meeting held between DRC and ES on issue.



ES submittal of schedule for addressing issues related to site drainage. Schedule included dates for Erosion Analysis, GW Hydraulic Analysis, Stabilization Plan, and revised surety analysis.

5/25/2005

ES letter informing DRC that the due date of 11/30/05 for completion of the erosion analysis could not be met.

11/30/2005

ES submittal of "Restoration of Grade Evaluation for the EnergySolutions Waste Disposal Facility" prepared by Whetstone Associates, Inc.

4/27/2006

DRC provides Restoration of Grade - Round 1 Interrogatories: Notice of Upcoming Requirements and Request for Schedule.

2/16/2007

ES submittal Restoration of Grade - Submittal of Revised Surety Calculations and Cost Estimate. Request for meeting with DRC staff to discuss impacts of excavated areas outside of Section 32 (Item 3).

3/5/2007

ES submittal Inclusion of Restoration of Grade Cost Estimate revisions with 2006 Annual Surety Review submittals dated 04/26/07, 05/11/07, and 05/21/07.

4/26/2007

5/11/2007 See above

5/22/2007 See above

DRC Conditional Approval of 2006 Annual Surety Review (including Restoration of Grade Items for excavated areas within Section 32)

6/1/2007

6/5/2007 Correction to DRC letter of 06/1/07